

## Title (en)

LIGAND, METAL COMPLEX CONTAINING LIGAND, AND REACTION USING METAL COMPLEX CONTAINING LIGAND

## Title (de)

LIGAND, METALLKOMPLEX MIT DEM LIGANDEN UND REAKTION UNTER VERWENDUNG DES METALLKOMPLEXES MIT DEM LIGANDEN

## Title (fr)

LIGAND, LIGAND CONTENANT UN COMPLEXE MÉTALLIQUE ET RÉACTION UTILISANT LE LIGAND CONTENANT UN COMPLEXE MÉTALLIQUE

## Publication

**EP 2966081 A4 20160824 (EN)**

## Application

**EP 14760209 A 20140304**

## Priority

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- JP 2014055510 W 20140304

## Abstract (en)

[origin: EP2966081A1] A hydrogen transfer reaction may be more efficiently promoted by using a metal complex represented by Formula (2): (wherein, R 1 to R 8 are the same or different, and each represents a hydrogen atom, a substituted or unsubstituted alkyl group or the like; or wherein; R 1 and R 2 , R 2 and R 3 , R 3 and R 4 , R 4 and R 5 , and R 5 and R 6 are respectively bonded to each other to form a bivalent hydrocarbon group; R 9 are the same or different, and each represents an alkyl group or cycloalkyl group; M is ruthenium (Ru) or the like; X is a ligand; and n is 0, 1 or 2). More specifically, the metal complex enables a hydrogenation reaction of various substrates having a stable carbonyl group or the like to be advanced with a high yield under mild conditions.

## IPC 8 full level

**C07F 9/58** (2006.01); **B01J 31/24** (2006.01); **C07B 61/00** (2006.01); **C07C 29/145** (2006.01); **C07C 29/149** (2006.01); **C07C 31/04** (2006.01); **C07C 31/20** (2006.01); **C07C 33/20** (2006.01); **C07C 33/22** (2006.01); **C07C 33/24** (2006.01); **C07C 209/50** (2006.01); **C07C 211/27** (2006.01); **C07C 213/02** (2006.01); **C07C 215/08** (2006.01); **C07F 9/6561** (2006.01); **C07F 15/00** (2006.01); **C07F 15/02** (2006.01); **C07F 15/04** (2006.01)

## CPC (source: EP US)

**B01J 31/189** (2013.01 - EP US); **B01J 31/24** (2013.01 - US); **B01J 31/2414** (2013.01 - US); **C07C 29/132** (2013.01 - US); **C07C 29/145** (2013.01 - EP US); **C07C 29/149** (2013.01 - EP US); **C07C 67/28** (2013.01 - US); **C07C 209/50** (2013.01 - EP US); **C07C 213/00** (2013.01 - US); **C07C 213/02** (2013.01 - EP US); **C07D 207/33** (2013.01 - EP US); **C07F 9/58** (2013.01 - EP US); **C07F 9/6561** (2013.01 - EP US); **C07F 15/004** (2013.01 - EP US); **C07F 15/0053** (2013.01 - EP US); **C07F 15/0066** (2013.01 - EP US); **C07F 15/008** (2013.01 - US); **C07F 15/0093** (2013.01 - US); **C07F 15/025** (2013.01 - EP US); **C07F 15/045** (2013.01 - EP US); **C07F 15/065** (2013.01 - EP US); **B01J 2231/641** (2013.01 - US); **B01J 2231/643** (2013.01 - EP US); **B01J 2231/645** (2013.01 - EP US); **B01J 2231/76** (2013.01 - US); **B01J 2531/0241** (2013.01 - EP US); **B01J 2531/821** (2013.01 - EP US); **B01J 2531/822** (2013.01 - US); **B01J 2531/827** (2013.01 - US); **B01J 2531/828** (2013.01 - US); **B01J 2531/842** (2013.01 - US); **B01J 2531/845** (2013.01 - EP US); **B01J 2531/847** (2013.01 - EP US); **Y02P 20/52** (2015.11 - EP US)

## Citation (search report)

- No further relevant documents disclosed
- See references of WO 2014136795A1

## Cited by

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## Designated contracting state (EPC)

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